S.O.D.A

Smart Osm Diff Analyzer

Version 0.2

Manuel Utilisateur

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Introduction

Le nombre de contributeurs à OSM augmente de plus en plus vite ainsi que le nombre de modifications apportées a la base de données. SODA a été conçu dans le but de faciliter l'analyse de ce flux de modifications en direct ou a postériori.
Les intérêts pour les différents acteurs de l'écosystème OSM sont les suivants :

- Les contributeurs peuvent suivre les données qu'ils ont entrées dans la base de données
- Les consommateurs peuvent suivre l evolution des données OSM qu'ils utilisent
- Les fournisseurs de données peuvent suivre l'évolution des données OSM qu ils ont fournies

Voici quelques exemples concrets d'applications possibles :

- Suivi thématique
- Génération d'alertes
- Bilan d'une cartopartie
- Surveillance de données sensibles
- Suivi d'import
- Détection de vandalisme
- Analyses statistiques
- Synchronisation avec des données externes

Principes

SODA est un outil d'analyse des modifications OSM. Ces modifications sont publiées régulièrement sur des serveurs sous forme de fichiers diffs. Se sont ces fichiers que SODA va traiter.
La configuration de SODA va lui indiquer la localisation des fichiers diffs à analyser, le nombre de fichiers à traiter ainsi que l'identifiant du fichier de départ.
Les analyses sont effectuées par des modules d'analyse spécifiques que SODA va instancier en fonction de la configuration indiquée par l'utilisateur

Deux interfaces sont disponibles pour lancer SODA :

- une interface graphique : **soda_QtUi**
- une interface en ligne de commande : **soda_batch**

Installation

Les packages de SODA sont disponibles sur http://thevenon.julien.free.fr/soda/download
Ils contiennent soit les exécutables de SODA soit des scripts d'installations ainsi que des exemples.

Linux

L'archive fournie pour Linux cible une distribution debian-based : la procédure d'installation contient un appel a APT pour installer les paquets nécessaires à la compilation du programme.
En fin d'installation un exemple va être lancé. Une connection a Internet est requise pour que l'exemple télécharge des fichiers de diffs et génère le rapport attendu.

Pour installer SODA sur Linux :

- Téléchargez le packet soda.tar.gz
- Extraire l'archive
- En fonction du shell utilisé sourcez **setup.sh** ou **setup.csh**
- Suivre les instructions du fichier **README.txt**
  Si l'installation s'est bien passée un exemple en ligne de commande va etre lancé et le rapport généré devrait etre ouvert dans Firefox

Windows

Des binaires précompilés pour Windows sont disponibles dans l'archive **soda_win32_binaries.tar.gz**
Pour pouvoir utiliser SODA il suffit d'extraire l'archive et double-cliquer sur l'exécutable.

Compilation

Si vous souhaitez recompiler les sources de SODA il faut au préalable installer **Msys**, **MinGW** ainsi que **Qt** (version 4.7.4). La version de **g++** fournie par MinGW doit etre au moins en 4.1.1
Pour procéder à l'installation :

- Lancer un terminal Msys
- Se placer dans le répertoire où a été extraite l'archive soda_win32_build.tar.gz
- Exécuter la command *. MinGW_build.sh*
  Si l'installation s'est bien passée un exemple en ligne de commande va etre lancé et le rapport généré devrait etre ouvert dans Firefox.

Exemples fournis

Des exemples sont fournis dans les paquets SODA afin d'illustrer son utilisation.
Les répertoires d'exemples contiennent des scripts **run_batch** permettant de lancer SODA en ligne de commande et des fichiers **run_gui** permettant de lancer l'interface graphique de SODA.
Si vous souhaitez exécuter les exemples en mode graphique il va falloir chargez vous même le fichier de configuration fourni (extension **.conf**) a l'aide du menu *File → Load configuration* puis cliquer sur le bouton *Start*.
Les scripts avec l'extension **.bat** sont des scripts Windows tandis que les scripts **.sh** et **.csh** sont des scripts Linux. Les scripts doivent être lancé depuis le répertoire où ils se trouvent

Exemple soda_analyzer_key_survey

Exemple utilisant le module de surveillance de clefs de tag pour obtenir toutes les actions effectuées en France entre le 13 janvier 2013 et le 20 janvier 2013 sur les tags dont la clef contient la chaine wikipedia.

Le résultat obtenu en sortie est un log HTML donnant des statistiques et un log HTML donnant le détail des actions repérées lors de l analyse.

Exemple soda_analyzer_new_user

Exemple utilisant le module de détection de nouveaux utilisateurs pour obtenir la liste des utilisateurs inscrits à OSM depuis moins de 3 mois ayant effectués des éditions dans la base entre le 13 janvier 2013 et le 20 janvier 2013.

Le résultat obtenu en sortie est un log HTML donnant la liste des utilisateurs détectés, leur date d'inscription ainsi qu'un lien sur leur profil OSM.

Exemple soda_analyzer_test_api

Exemple utilisant le module qui teste l'API de services fournie par SODA.
Le résultat obtenu est un fichier texte contenant les données OSM obtenues via l'API

Exemple soda_analyzer_test_dom

Exemple utilisant le module de test dom afin d'afficher les donnees XML de diff transmises par SODA aux modules via la representation DOM.
Le résultat obtenu est une représentation texte des données OSM reçues

Exemple soda_analyzer_user_data_dump

Exemple utilisant le module user_data_dump pour recupérer tous les objets OSM que l'utilisateur quicky a créés modifiés ou supprimés.
Les objets sont enregistrés dans des fichiers osm.

Exemple soda_analyzer_user_object

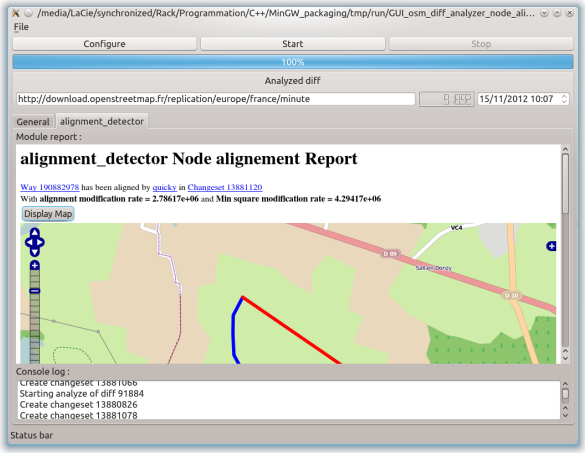
Exemple utilisant le module user_object pour générer des notifications lorsque des utilisateurs effectuent des modifications sur des objets appartenant à une liste d'objets à monitorer et indiquer le détail de ces modifications.
Le fichier **relation.osm** est utilisé comme fichier d'initialisation ce qui signifie que les objets qu'il contient vont etre ajoutés à la liste des objets monitorés.
Le parametre `user_name` avec la valeur `Geogast` indique que si dans l 'un des fichiers diffs analysés se trouvent des éditions effectuées par Geogast alors le module ajoutera à la liste des objets monitorés les objets concernés par ces éditions.

Le résultat obtenu est un rapport HTML contenant le détail des modifications observées : changeset, nom d'utilisateur, lien vers l'objet OSM, tags ajoutés/modifiés/supprimés etc

Exemple soda_analyzer_node_alignment

Exemple utilisant le module de détection d'alignement pour repérer les ways composés d'au moins 3 nœuds dont le rapport de distance minimale à leur regression lineaire entre la version courante et la version précédente est supérieur a 1.
La configuration spécifie des diffs contenant un way « réaligné »

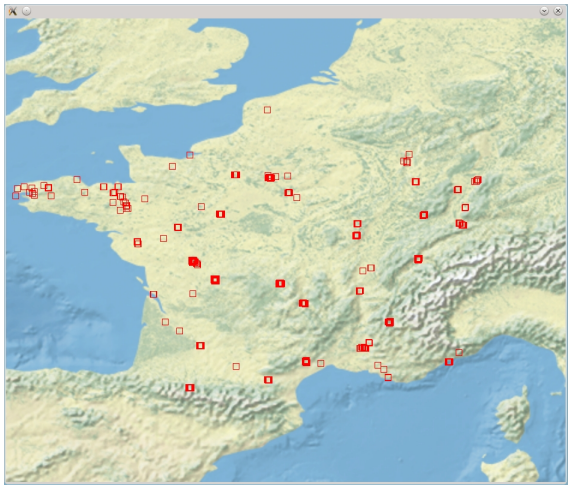
Le résultat obtenu en sortie est un log HTML contenant les informations des way ainsi qu'une embedded map OSM affichant l'ancienne forme du way et la nouvelle.



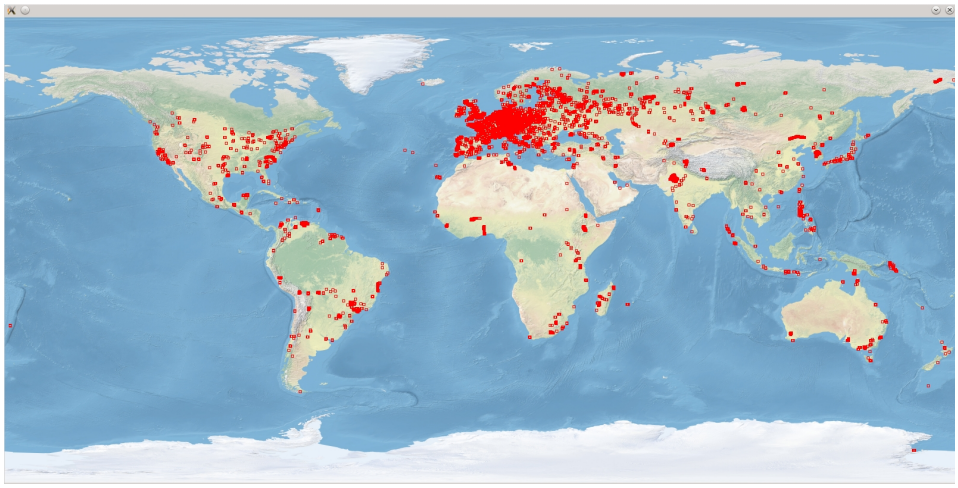
Exemple soda_analyzer_war_room

Exemple utilisant le module war_room pour fournir un affichage graphique des modifications effectuées.
Les fichiers de configuration indiquent l'image à utiliser comme fond d'affichage, la bounding box correspondante, la taille du marqueur et le nombre de fichiers diffs à analyser entre chaque reset de l'affichage.
Deux fichiers de configurations sont fournis pour cet exemple :

- **france.conf** définit une analyse sur les minutes diff france avec un reset d'affichage toutes les 30 minutes diff.



- **world.conf** définit une analyse sur les diffs jour monde avec un reset d'affichage tous les 2 diffs jours.



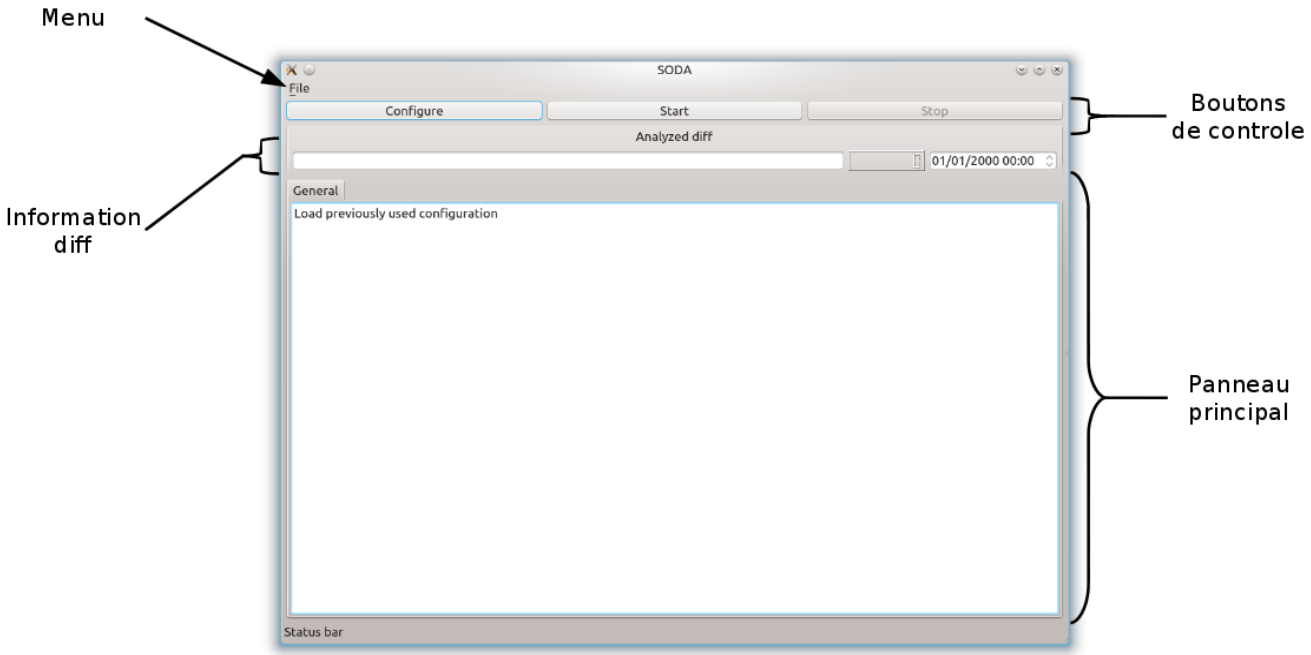
Soda_QtUi

Il s'agit de la version de SODA possédant une interface graphique. Pour la démarrer il suffit de lancer l exécutable **soda_QtUi.exe**
La configuration et l'exécution se font directement depuis l'interface graphique.

Présentation de l'interface

L'interface se compose des éléments principaux suivants :

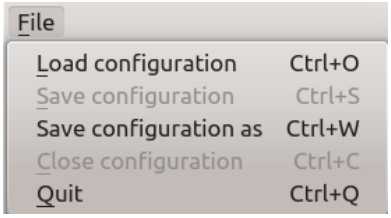
- Menu : il permet de gérer les fichiers de configuration et quitter SODA
- Bouttons de contrôle : ils permettent d'accéder à la configuration courante et controler l'exécution des analyses
- Informations diff : les informations relatives au fichier de diff qui est en cours d'analyse
- Panneau principal : il permet d afficher les informations fournies par SODA et les modules d analyse.
  SODA affiche ses informations dans l'onglet général tandis que chaque module affiche ses informations dans un onglet dédié portant le même nom que le module



Menu

Il contient les 5 items suivants:

- *Load configuration* : chargement d'une configuration depuis un fichier de configuration
- *Save Configuration* : sauvegarde de la configuration courante dans le fichier courant
- *Save Configuration As* : sauvegarde de la configuration courante dans un fichier
- *Close Configuration* : fermeture de la configuration, la configuration courante est réinitialisée
- *Quit* : quitte l'application



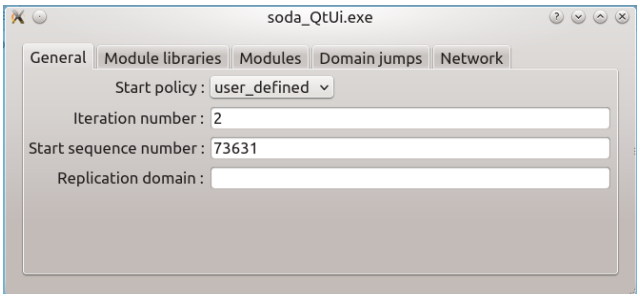
Boutons de contrôle

Ils sont au nombre de 3 :

- *Configure* : configuration de l'application
- *Start* : lance l'analyse
- *Stop* : demande l'arrêt de l'analyse. L'arrêt aura lieu apres la fin de l'analyse du fchier de diff en cours

Fenêtre de configuration

Cette fenêtre apparaît apres avoir cliqué sur le bouton *Configure*. Elle se décompose en plusieurs onglets : *général*, *module libraries*, *modules*, *domain jumps*, *network*.
Pour terminer la configuration fermez la fenêtre de configuration. La configuration courante est sauvegardée dans le fichier **tmp.conf** qui sera lu apres appui sur le bouton *Start*



General

Cet onglet permet de paramétrer la plotitique d'accès au diff de SODA.

Rappel sur les diffs OSM :

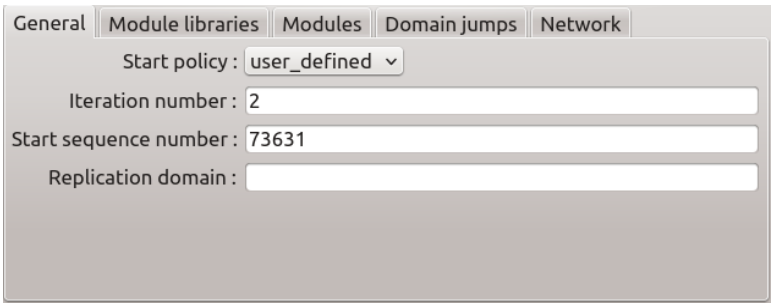
Les diffs peuvent être publiées avec 3 periodes differentes : minute, heure, jour
Les serveurs OSM fournissent des fichiers de diff qui couvrent l ensemble de la plan ête mais il existe aussi des serveurs qui publient des fichiers de diff couvrant des zones plus restreintes : continent, pays etc.

http://wiki.openstreetmap.org/wiki/Planet.osm/diffs

Les diffs sont identifiées par un nombre a 9 chiffres et sont stockées dans un arbre dont la structure peut être déduite de l'identifiant.
Par exemple le fichier diff 123456789 sera stocké dans l arborescence suivante : `123/456/789.osc.gz`
L'URL où se situe l'arborescence est le domaine de réplication

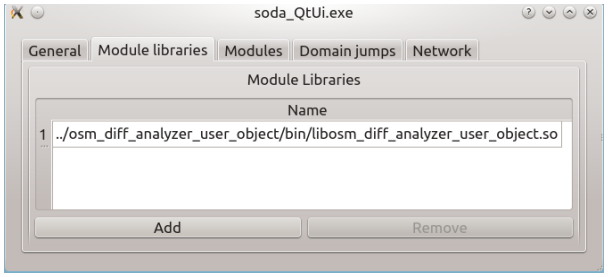
L'onglet *general* permet de configurer les paramètres suivants :

- *Start Policy* definit la politique de démarrage des accès diffs :
  - **current** : SODA va commencer l'analyse avec le dernier fichier diff disponible sur le serveur au moment où l'on clique sur *Start*. Il va ensuite se mettre en attente du prochain fichier diff généré, l'analyser etc etc
  - **stored** : SODA stocke l'identifiant et le *replication domain* du dernier fichier diff analysé une fois l'analyse de celui-ci terminée. *Stored* permet de reprendre l analyse avec le fichier diff suivant le dernier fichier analysé.
  - **user defined** : SODA va commencer l'analyse par le fichier diff dont l'identifiant est spécifié par le champ *Start Seq Number* et qui se trouve dans l URL specifiée par *Replication Domain*
- *Iteration Number* : spécifie le nombre de fichier diffs à analyser. La valeur par défaut est 0 ce qui signifie que l'analyse ne s'arrêtera que sur demande de l'utilisateur ou en cas d'erreur. Ce paramètre permet de définir la plage temporelle d'une analyse. Une valeur de 60 pour les fichiers minute diff definira une plage d'analyse d 'une heure de modifs OSM.
- *Start Seq Number* : spécifie l'identifiant du fichier diff de démarrage pour la *Start Policy User defined*
- *Replication Domain* : spécifie la localisation des fichiers diff pour les *Start Policy Current* et *User defined*



Module libraries

Les modules d'analyse de SODA sont fournis dans des fichiers séparés dont l extension est **.so**. Celà permet de ne charger que les modules nécessaires. L'onglet *module libraries* permet de spécifier les librairies qui vont être utilisées.



Pour ajouter une librairie :

- Cliquez sur le bouton *Add*
- Sélectionnez le fichier librairie (fichier avec extension **.so**) à ajouter
- La librarie apparaît dans la liste.

Pour supprimer une librarie :

- Sélectionnez la dans la liste en cliquant sur la ligne correspondante
- Cliquez sur le bouton *Remove*
- La librarie est supprimée de la liste.

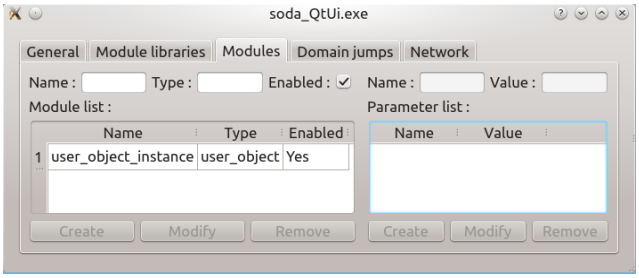
Modules

Cet onglet permet d'instancier et configurer les modules d'analyse que SODA va exécuter.
Dans la partie gauche de l'onglet se trouvent les informations relatives aux instances de modules :

- Champs d'information : permettent de spécifier les informations du module
- Liste des modules instanciés
- Boutons d'ajout/modification/suppression

Dans la partie droite de l'onglet se trouvent les informations relatives aux paramètres de configuration du module sélectionné dans la partie gauche :

- Champs d'information : permettent de spécifier les valeurs du paramètre
- Liste des paramètres du module
- Boutons d'ajout/modification/suppression



Pour créer une nouvelle instance de module :

- Indiquez dans le champ *Name* le nom de votre choix pour l'instance du module. Ce nom sera celui de l'onglet dans lequel le module affichera ses informations.
- Indiquez dans le champ *Type* le type du module. Celui-ci est défini par la librarie et indiqué dans documentation.
  Généralement les libraries ont pour nom **libsoda_analyzer_<type>**.
  La case à cocher *enabled* permet d'indiquer si le module sera activé (*enabled* coché) ou désactivé (*enabled* non coché)
- Cliquez sur le bouton *Add*.
  L'instance du module apparaît dans la liste des modules instanciés

Remarque : il est possible de créer plusieurs modules de même type. Il est également possible de créer des modules de type différents.

Pour modifier le type ou l'activation d'un module :

- Dans la liste des modules cliquez sur la ligne correspondant au module à supprimer.
  Les champs type et activation recoivent les valeurs correspondant au module sélectionné
- Modifiez le type et/ou l'activation du module
- Cliquez sur le bouton *Modify*
  La ligne correspondant au module est mise a jour avec les nouvelles valeurs

Remarque : Seuls le type et l'activation d'un module sont modifiables. Pour renommer un module il faut le supprimer et le recréer avec le nouveau nom.

Pour supprimer une instance de module :

- Dans la liste des modules cliquez sur la ligne correspondant au module à supprimer.
- Cliquez sur le bouton *Delete*.
  La ligne correspondant au module est supprimée de la liste des modules

Pour ajouter un paramètre a une instance de module :

- Sélectionnez la ligne correspondant a l'instance du module
  La liste des paramètres est actualisée dans la partie droite de la fenêtre
- Remplissez les champs *Name* et *Value* avec les noms et valeurs du paramètre
- Cliquez sur le bouton *Add*
  La liste des paramètres du module est actualisée et le nouveau paramètre apparaît.

Pour modifier un paramètre d'une instance de module :

- Sélectionnez la ligne correspondant a l'instance du module
  La liste des paramètres est actualisée dans la partie droite de la fenêtre.
- Sélectionnez dans la liste des paramètres la ligne correspondant au paramètre à modifier
- Modifiez la valeur du paramètre.
- Cliquez sur le bouton *Modify*.
  La liste des paramètres est rafaichie avec la nouvelle valeur du paramètre

Remarque : Il n'est pas possible changer le nom d'un paramètre. Si vous souhaitez renommer un paramètre il faut le supprimer et le recréer avec le bon nom.

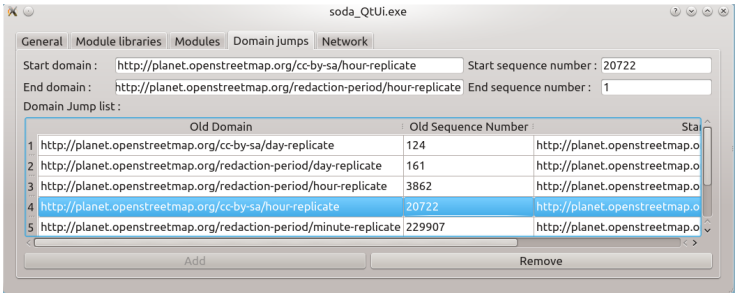
Pour supprimer un paramètre :

- Sélectionnez la ligne correspondant à l'instance du module
  La liste des paramètres est actualisée dans la partie droite de la fenêtre.
- Sélectionnez dans la liste des paramètres la ligne correspondant au paramètre à supprimer
- Cliquez sur le bouton *Delete*
  La liste des paramètres est rafaichie, la ligne correspondant au paramètre a été supprimée.

Domain Jumps

Cet onglet permet de configurer les Domains Jumps. Il est divisé en 3 parties :

- Champs des Domains Jumps : permettent de spécifier les informations des Domains Jump
- Liste des Domains jumps
- Boutons d'ajout/suppression



Les domaines de réplications correspondent aux URLs contenant les arborescences de fichiers diffs.
Il arrive qu'au cours du temps l'URL du domaine de réplication soit modifiée: par exemple dans le cas des diffs monde jour OSM il y a plusieurs URL différentes :
http://planet.openstreetmap.org/cc-by-sa/day-replicate : diffs de la période CC-by-SA
http://planet.openstreetmap.org/redaction-period/day-replicate : diffs de la période de rédaction
http://planet.openstreetmap.org/replication/day : diffs de la période ODBL (période actuelle)
Afin de faire des analyses sur des périodes pendant lesquelles des changements d'URL ont eu lieu SODA possède un mecanisme appelé Domain Jump permettant de passer d'un domaine à l autre.

NB : il est également possible de définir des transitions arbitraires entre deux identifiants de fichiers diffs d'un meme domaine, par exemple pour ne pas analyser une période précise.

L'onglet Domain Jumps permet de configurer ces transitions.
Un Domain Jump est caracterisé par les paramètres suivants :

- *Start Domain* : URL du domaine avant transition
- *Start sequence number* : identifiant du dernier fichier diff avant la transition
- *End Domain* : URL du domaine apres transition
- *End sequence number* : identifiant du premier fichier diff après la transition

Exemple
Pour passer de la période de rédaction à la periode ODBL le Domain jump est défini comme ceci :
`http://planet.openstreetmap.org/redaction-period/day-replicate 161`
`http://planet.openstreetmap.org/replication/day 1`

Pour ajouter un Domain jump :

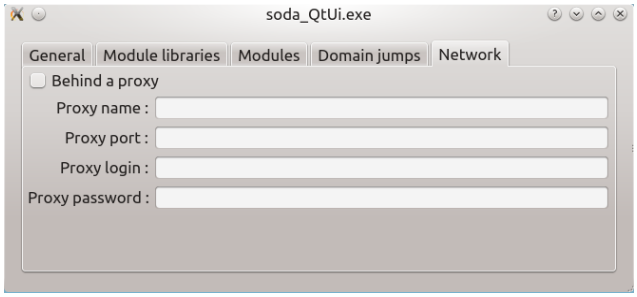
- Remplir les champs du Domain Jump
- Cliquer sur le bouton *Add*
  La liste des Domains Jump est rafraichie et le nouveau Domain Jump apparaît

Pour supprimer un Domain Jump :

- Dans la liste des Domains Jump, cliquez sur le Domain Jump à supprimer
- Cliquer sur le bouton *Remove*
  La liste des Domains Jump est rafraichie et le Domain Jump précédemment sélectionné disparait

Network

Cet onglet permet de configurer les paramètres de proxy si vous vous trouvez derrière un proxy.



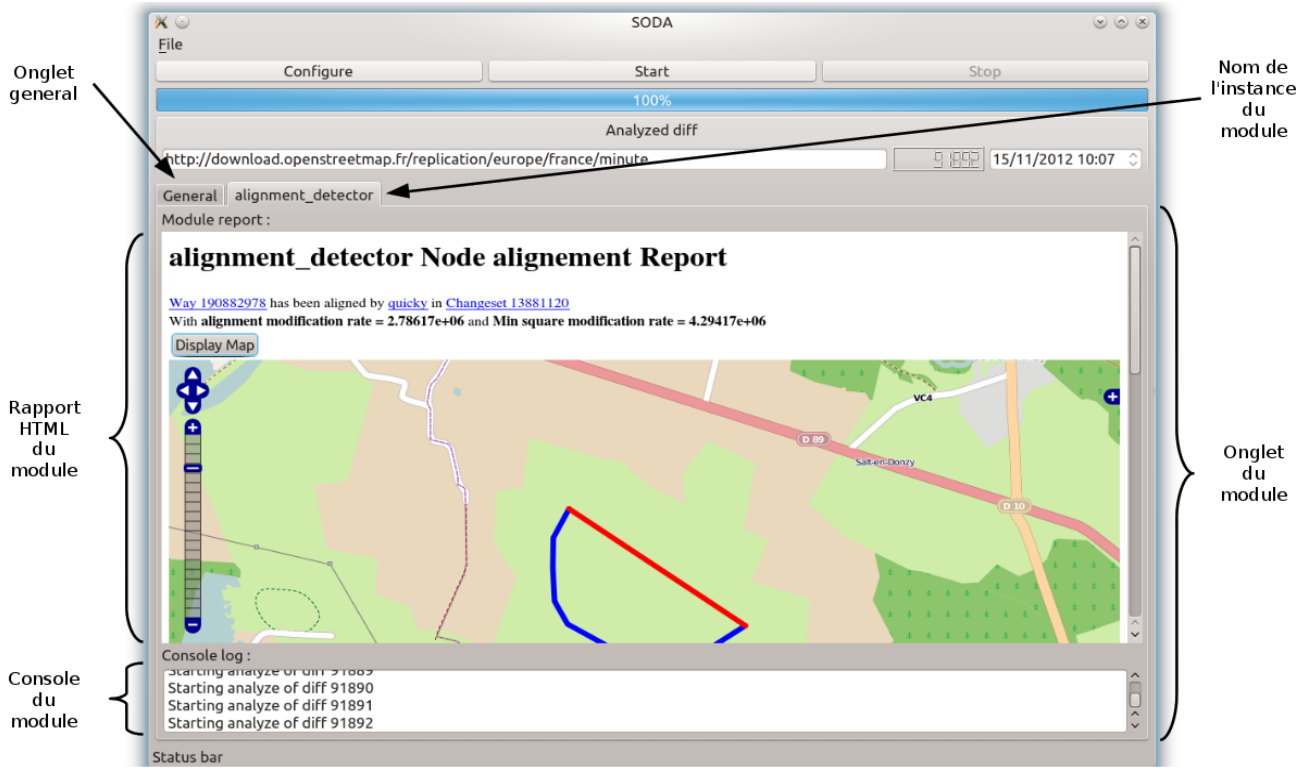
Il permet de définir les paramètres suivants :

- Adresse du proxy
- Port du proxy
- Nom d'utilisateur
- Mot de passe

Avertissement : le mot de passe est masqué dans l'interface graphique mais il est sauvé en clair dans le fichier de configuration (par defaut **tmp.conf**)

Lancement de l'analyse

Apres avoir configuré SODA par l'interface de configuration ou chargé un fichier de configuration cliquez sur le bouton *Start* pour lancer l'analyse.
L'affichage des informations non spécifiques à un module se fait dans l'onglet général. SODA va y indiquer des informations telles que l'ouverture et la fermeture des librairies de modules etc
Pour chaque module d'analyse instancié et activé un onglet portant le nom de l'instance du module va être créé. Par defaut l'onglet ne contient qu'une console permettant au module d'afficher des informations textuelles. Si le module génère un rapport, celui apparaitra au dessus de la console.
Il est également possible que les modules génèrent plusieurs rapports ou d'autres sorties qu'un rapport. Pour en savoir plus reportez vous a la documentation des differents modules.



Arret de l'analyse

Pour demander l'arrêt de l'analyse cliquez sur le bouton *Stop*.
L'analyse du fichier diff en cours va se terminer. En fonction de la taille du fichier diff, du nombre de modules instanciés et de la complexité de leur code le temps nécessaire pour que l'analyse s'arrête peut varier. Lorsque l'analyse est terminée le bouton *Start* redevient de nouveau cliquable.

Remarque : Il est important de terminer l analyse proprement pour que SODA enregistre les informations du dernier fichier diff analysé, notamment pour l usage en *Start policy Stored*, et pour que les modules ferment proprement leurs sorties

Soda_batch

Il s'agit de la version ligne de commande de SODA.
Elle se lance avec la commande suivante : **`soda_batch.exe [fichier_de_configuration]`**
Si aucun fichier de configuration n'est precisé SODA va chercher un fichier **osm.conf** dans le répertoire courant et générer une erreur si ce fichier n'existe pas.
L'exécution va démarrer automatiquement et se poursuivre jusqu'à atteindre une condition d'arrêt définie par le fichier de configuration sauf si elle est interrompue par un Control+C ou une erreur interne.
Les informations fournies par SODA apparaissent sur la sortie standard.
Les résultats des modules d'analyse peuvent apparaître sur la sortie standard,être enregistrés dans des fichiers spécifiques ou émis sous d'autres formes en fonction des modules d'analyse.
Pour plus d'informations sur les types de sorties de chaque type de module reportez vous a leurs documentations respectives

Configuration

La configuration se fait via un fichier de configuration en XML. Le fichier peut être écrit manuellement ou généré à l'aide de l'interface graphique de SODA.
La suite de la documentation se focalise sur la manière d'écrire la configuration en XML. Pour plus de détails sur les differentes options reportez vous aux paragraphes de configuration correspondant dans le chapitre Soda_QtUi.

Le fichier XML commence par les lignes suivantes :
```
<?xml version='1.0' encoding='UTF-8'?>
<osm_diff_watcher_configuration>
```
La suite du fichier contient les paramètres de configuration et se termine par la ligne suivante :
```
</osm_diff_watcher_configuration>
```

Il est possible d'insérer des lignes de commentaires. Elles doivent commencer par **`<!--`** et se terminer par **`-->`**

Exemple : **`<!-- Ceci est un commentaire -->`**

General

Chaque option de configuration correspond à un element XML de type **`variable`**.
L'attribut **`name`** définit le nom de la variable, l'attribut **`value`** definit sa valeur

- start_policy : Variable pouvant prendre les valeurs **`current`**,**`stored`** ou **`user_defined`**
  Exemple : **`<variable name="start_policy" value="user_defined"/>`**

- iteration_number : Variable pouvant prendre une valeur entiere positive
  Exemple : **<variable name="iteration_number" value="10080"/>**

- start_sequence_number : Variable pouvant prendre une valeur entière positive
  Exemple : **<variable name="start_sequence_number" value="177455"/>**

- replication_domain: Variable recevant une URI
  Exemple : **<variable name="replication_domain"**
  value="http://download.openstreetmap.fr/replication/europe/france/minute"/>

Module libraries

Chaque librarie est indiquée par un élément XML de type **library** dont l'attribut **name** contient le chemin. Celui ci peut être absolu ou relatif par rapport au répertoire d'exécution.

Exemple : **<library name="../../release/key_survey/bin/libsoda_analyzer_key_survey.so" />**

Modules

Chaque instance de module va être définie par une arborescence XML.
L'élément racine est de type **analyzer**. Il comporte deux attributs obligatoire : **type** et **name** qui permettent de définir respectivement le type et le nom de l'instance du module.
Un troisieme attribut optionnel **enabled** recevant les valeurs yes ou no permet d indiquer si le module sera activé ou non. Si cet attribut est absent le module est considéré comme actif.

Les paramètres de modules sont définis par des elements XML de type **parameter** et contiennent deux attributs obligatoires **name** et **value** qui définissent respectivement le nom et la valeur du paramètre.

Exemple :

```
<analyzer type="key_survey" name="key_survey_instance">
        <parameter name="searched_string" value="wikipedia"/>
</analyzer>
```

Si aucun paramètre n'est défini pour le module il est possible d'utiliser la forme compacte pour l élément **analyzer**

Exemple : **<analyzer type="test_api" name="test_api_instance" />**

Domain Jumps

Les sauts de de domaine sont définis par les éléments XML de type **`replication_domain_jump`**.
Ceux-ci contiennent 4 attributs obligatoires

- last_sequence_number : identifiant du dernier fichier diff du domaine
- old_domain : URL de l'ancien domaine
- first_sequence_number : identifiant du premier fichier diff du nouveau domaine
- new_domain : URL du nouveau domaine

Exemple :
```
<replication_domain_jump last_sequence_number="1268792"
old_domain="http://planet.openstreetmap.org/cc-by-sa/minute-replicate"
first_sequence_number="1"
new_domain="http://planet.openstreetmap.org/redaction-period/minute-replicate" />
```

Network

Les paramètres d'authentification du proxy sont définis par des éléments XML de type **`variable`** dont les noms sont : **`proxy_authentication.proxy_name`**, **`proxy_authentication.proxy_port`**, **`proxy_authentication.proxy_login`**, **`proxy_authentication.proxy_password`**

Exemple :
```
<variable name="proxy_authentication.proxy_name" value="monproxy.mondomaine.org"/>
<variable name="proxy_authentication.proxy_port" value="8080"/>
<variable name="proxy_authentication.proxy_login" value="monpseudo"/>
<variable name="proxy_authentication.proxy_password" value="monmotdepasse"/>
```

Exemple de fichier de configuration

Voici un fichier de configuration complet chargeant deux librairies de modules et instanciant trois modules dont un pour détecter les nouveaux utilisateurs et deux modules de suivi de clefs. La configuration des Domains Jumps permet d'effectuer les analyses aussi bien avant qu'après le changement de licence sur les fichiers diffs minute, heure, jour

```
<osm_diff_watcher_configuration>
<!-- Configuration generale -->
  <variable name="start_policy" value="user_defined"/>
  <variable name="iteration_number" value="10080"/>
  <variable name="start_sequence_number" value="177455"/>
  <variable name="replication_domain"
value="http://download.openstreetmap.fr/replication/europe/france"/>
<!-- Configuration des librairies de modules -->
  <library name="../soda_analyzer_key_survey/bin/libsoda_analyzer_key_survey.so" />
  <library name="../soda_analyzer_new_user/bin/libsoda_analyzer_new_user.so""/>
<!-- Configuration des modules -->
  <analyzer type="key_survey" name="suivi_wikipedia">
        <parameter name="searched_string" value="wikipedia"/>
  </analyzer>
  <analyzer type="new_user" name="new_user_instance" />
 </analyzer>  <analyzer type="key_survey" name="suivi_sandre">
        <parameter name="searched_string" value="sandre"/>
  </analyzer>
<!-- Configuration des sauts de domaine -->
<!-- Domain jumps pour les minutes diff monde -->
  <replication_domain_jump last_sequence_number="1268792"
old_domain="http://planet.openstreetmap.org/cc-by-sa/minute-replicate"
first_sequence_number="1"
new_domain="http://planet.openstreetmap.org/redaction-period/minute-replicate" />
  <replication_domain_jump last_sequence_number="229907"
old_domain="http://planet.openstreetmap.org/redaction-period/minute-replicate"
first_sequence_number="1" new_domain="http://planet.openstreetmap.org/replication/minute" />
<!-- Domain jumps pour les hourly diffs monde -->
  <replication_domain_jump last_sequence_number="20722"
old_domain="http://planet.openstreetmap.org/cc-by-sa/hour-replicate"
first_sequence_number="1"
new_domain="http://planet.openstreetmap.org/redaction-period/hour-replicate" />
  <replication_domain_jump last_sequence_number="3862"
old_domain="http://planet.openstreetmap.org/redaction-period/hour-replicate"
first_sequence_number="1" new_domain="http://planet.openstreetmap.org/replication/hour" />
<!-- Domain jumps pour les daily diffs monde -->
  <replication_domain_jump last_sequence_number="124"
old_domain="http://planet.openstreetmap.org/cc-by-sa/day-replicate"
first_sequence_number="1"
new_domain="http://planet.openstreetmap.org/redaction-period/day-replicate" />
  <replication_domain_jump last_sequence_number="161"
old_domain="http://planet.openstreetmap.org/redaction-period/day-replicate"
first_sequence_number="1" new_domain="http://planet.openstreetmap.org/replication/day" />
<!-- Configuration du proxy -->
  <variable name="proxy_authentication.proxy_name" value="monproxy.mondomaine.org"/>
  <variable name="proxy_authentication.proxy_port" value="8080"/>
  <variable name="proxy_authentication.proxy_login" value="monlogin"/>
  <variable name="proxy_authentication.proxy_password" value="monmotdepasse"/>
</osm_diff_watcher_configuration>
```

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